

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No.:

Attorney Docket No.:

10/669,858

NTI1002US

Assignee: Nanotechnologies, Inc.

Examiner:

Not Assigned

For: Nanopowder Synthesis Using Pulsed Arc
Discharge And Applied Magnetic Field

Art Unit:

Not Assigned

File Date: September 24, 2003

Inventors: Kurt Schroder & Doug Jackson

Commissioner For Patents
U.S. Patent And Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.97 and 1.98, Forms PTO/SB/08a and PTO/SB/08b are enclosed for consideration in the examination and prosecution of this case. A copy of each reference (eleven U.S. Patent Documents and two Publications) is enclosed herein.

No representation is made or intended that more relevant information does not exist, that the order of presentation of the enclosed materials represents order of importance or relevance, that any admissions of any kind is made with regard to the enclosed materials, or that any of the enclosed material is properly citable as prior art against this case.

Applicants respectfully submit that their invention is patentable over the enclosed and listed materials.

01/06/2004 HAL111 00000023 10669858

01 FC:1806

180.00 DP

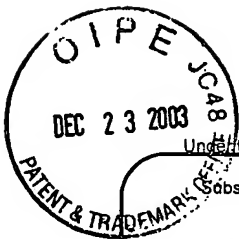
Information Disclosure Statement
U.S. Patent Application Ser. No. 10/669,858
Page 2

In order to comply with 37 CFR §1.98, the U.S. Patent references are listed with their issue or publication dates:

1. US Pat. No. 5,514,349 issued on May 7, 1996; patentee: Nanophase Technologies Corporation.
2. US Pat. No. 5,581,507 issued on December 3, 1996; patentee: Dallas Semiconductor Corporation.
3. US Pat. No. 6,472,632 issued on October 29, 2002; patentee: Nanoscale Engineering and Technology Corporation.
4. US Pat. No. 5,847,684 issued on February 23, 1999; patentee: Nanophase Technologies Corporation.
5. US Pat. No. 6,190,634 issued on February 20, 2001; patentee: President and Fellows of Harvard College.
6. US Pat. No. 5,560,960 issued on October 1, 1996; patentee: The United States of America.
7. US Pat. No. 6,126,740 issued on October 3, 2000; patentee: Midwest Research Institute.
8. US Pat. No. 6,479,028 issued on November 12, 2002; patentee: The Regents of the University of California.
9. US Pat. No. 6,217,901 issued on April 17, 2001; patentee: Alnis, LLC.
10. US Pat. No. 6,472,374 issued on October 29, 2002; patentee: Cambridge University Technical Services Limited.
11. US Pat. App. Publication No. 20030108459, published on June 12, 2003; Inventors: L. W. Wu and Wen-Chiang Huang.

Publications include the following:

12. WEIHUA JIANG and KIYOSHI YATSUI, "Pulsed Wire Discharge for Nanosize Powder Synthesis", IEEE Transactions On Plasma Science, October 1998, Pages 1498-1501, Vol. 26, No. 5, IEEE, United States.
13. A. WEISENBURGER, "Application of Pulsed Power and Microwave Techniques for the Production of Nanocrystalline Powders and Ceramic Bulk Materials", Metastable, Mechanically Alloyed and Nanocrystalline Materials, year 2000, pp. 545-550, Materials Science Forum, vols. 343-346, Trans Tech Publishers Ltd., Switzerland.



PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known

Application Number	10/669,858
Filing Date	9/24/03
First Named Inventor	Kurt Schroder
Art Unit	Not Assigned
Examiner Name	Not Assigned
Attorney Docket Number	NTI1002US

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	1	US- 5,514,349	05/07/1996	John C. Parker	
	2	US- 5,581,507	12/03/1996	Francis A. Scherpenberg	
	3	US- 6,472,632 B/	10/29/2002	Dennis Roger Peterson	
	4	US- 5,874,684	02/23/1999	John C. Parker	
	5	US- 6,190,634 B/	02/20/2001	Charles M. Lieber	
	6	US- 5,560,960	10/01/1996	Alok Singh	
	7	US- 6,126,740	10/03/2000	Douglas L. Schulz	
	8	US- 6,479,028 B/	11/12/02	Richard B. Kaner	
	9	US- 6,217,901 B/	04/17/2001	Michael G. Percott	
	10	US- 6,472,374 B/	07/04/1996	David Stephen Charnock-Jones	
	11	US2003/0108459	06/12/03	L.W. Wu	
		US-A1			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

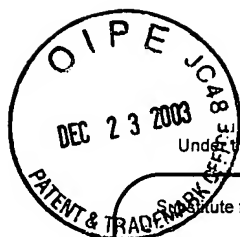
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPC Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

2

of

2

Complete if Known

Application Number	10/669,858
Filing Date	9/24/03
First Named Inventor	Kurt Schroder
Art Unit	Not Assigned
Examiner Name	Not Assigned
Attorney Docket Number	NTI1002US

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	12	WEIHUA JIANG and KIYOSHI YATSUI, "Pulsed Wire Discharge for Nanosize Powder Synthesis", IEEE Transactions On Plasma Science, October 1998, Pages 1498-1501, Vol. 26, No. 5, IEEE, United States.	
	13	A. WEISENBURGER, "Application of Pulsed Power and Microwave Techniques for the Production of Nano- crystalline Powders and Ceramic Bulk Materials ", Published in Metastable, Mechanically Allowed and Nanocrystalline Materials, year 2000, pp 545-550, Materials Science Forum, vols. 343-346, Trans Tech Publishers Ltd., Switzerland.	

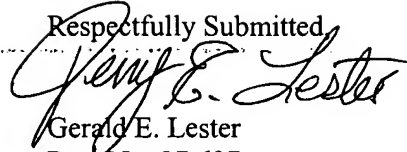
Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Respectfully Submitted,

A handwritten signature in cursive script, reading "Gerald E. Lester". The signature is written in dark ink and is positioned above the printed name and contact information.

Gerald E. Lester

Reg. No. 27,697

Law Office of Gerald E. Lester

22107 Fielder Dr.

Katy, Texas 77450

Ph. (281) 392-8288

Fx. (281) 392-2850



12-29-03

8

UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Patent Application No.:

10/669,858

Attorney Docket No.:

NTI1002US

Filing Date:

09/24/03

Examiner:

Not Assigned

Assignee/Applicant:

Nanotechnologies, Inc.

Art Unit:

Not Assigned

Inventors: Kurt Schroder &
Doug Jackson

For: Nanopowder Synthesis Using Pulsed Arc
Discharge And Applied Magnetic Field

Commissioner For Patents
U.S. Patent And Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

EXPRESS MAIL CERTIFICATION UNDER 37 CFR 1.10

Express Mail No.

ER443716425US

Date Of Deposit

December 23, 2003

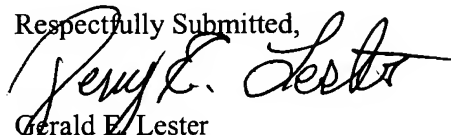
I hereby certify that the following items are being deposited with the United States Postal Service "Express Mail Post Office To Addressee" service under 37 CFR 1.10 on the date indicated above, and is addressed to Commissioner For Patents, U.S. Patent And Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 :

1. Form PTO/SB/08a (2 sheets);
2. Check In Amount Of \$180.00 US, Made Out To Director Of Patents And Trademarks;
3. Copies of eleven (11) U.S. Patent Documents and two (2) publications;
4. Cover Letter;

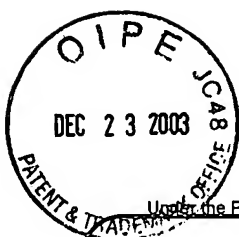
U.S. Patent Application Ser. No. 10/669,858
Express Mail Certification
Page 2

5. Transmittal Form;
6. Fee Transmittal Form;
7. Information Disclosure Statement (3 pages); And
8. Self-Addressed And Stamped Post Card For Receipt Of Official Date Stamp Of The US Patent And Trademark Office And Return To Addressee.

Respectfully Submitted,



Gerald E. Lester
Reg. No. 27,697
22107 Fielder Dr.
Katy, Texas 77450
Ph. No. 281-392-8288
Fx. No. 281-392-2850



PTO/SB/21 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Application Number	10/669,858
Filing Date	09/24/03
First Named Inventor	Kurt Schroder
Art Unit	Not Assigned
Examiner Name	Not Assigned
Attorney Docket Number	NTI1002US

Total Number of Pages in This Submission

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement (2 pages) <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks Copies of eleven patent documents and two publications; check in amount of \$180.00; Express Mail Certification; Transmittal Form; Information Disclosure Statement (3 pages); Self-addressed and stamped post card; and form PTO/SB/08a & 08b.		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Gerald E. Lester
Signature	<i>Gerald E. Lester</i>
Date	December 23, 2003

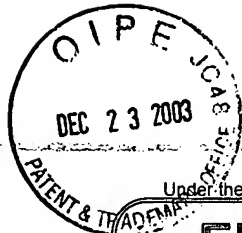
CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Gerald E. Lester		
Signature	<i>Gerald E. Lester</i>	Date	12/23/03

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)**180.00****Complete if Known**

Application Number	10/669,858
Filing Date	9/24/03
First Named Inventor	Kurt Schroder
Examiner Name	Not Assigned
Art Unit	Not Assigned
Attorney Docket No.	NTI1002US

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit Account Number
Deposit Account Name

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments☐ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180.00
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**180.00****FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)			(\$) 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-20** =	X	
Multiple Dependent	-3** =	X	

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)**0.00**

**or number previously paid, if greater; For Reissues, see above

SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	Gerald E. Lester	Registration No. (Attorney/Agent)	27,697	Telephone	281-392-8288
Signature	<i>Gerald E. Lester</i>	Date	12/23/03		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.